PERMITS TO CONSTRUCT

3 new coaters & 1 new oven vented to existing APC system

Applicant's Name: *E/M Coating Services*
Facility ID: 136173
Mailing Address: 20751 Superior St., Chatsworth, CA 91311
Equipment Address: 20751 Superior St., Chatsworth, CA 91311

EQUIPMENT DESCRIPTION

A/N (498856) - Title V permit revision

Minor permit revision

A/N 498857 (P/C)

MODIFICATION TO THE AIR POLLUTION CONTROL SYSTEM UNDER PERMIT # F81682, A/N 449338 CONSISTING OF:

AIR POLLUTION CONTROL SYSTEM CONSISTING OF:

A. PM CONTROL SYSTEM CONSISTING OF:

1. SPRAY BOOTH NO. 1, DEVILBISS, FLOOR FILTER TYPE, SERIAL NO. 406, 14'-0" W. X 7'-0" H. X 18'-0" D., WITH ONE 3.0 HP EXHAUST FAN.
2. SPRAY BOOTH NO. 2, DEVILBISS, FLOOR FILTER TYPE, 14'-0" W. X 7'-0" H. X 18'-0" D., WITH ONE 3.0 HP EXHAUST FAN.
3. SPRAY BOOTH NO. 3, DEVILBISS, FLOOR FILTER TYPE, 14'-0" W. X 7'-0" H. X 18'-0" D., WITH ONE 3.0 HP EXHAUST FAN.
4. SPRAY BOOTH NO. 4, BINKS, BENCH FILTER TYPE, 4'-5" W. X 7'-2" H. X 5'-0" D., WITH ONE 2 HP EXHAUST FAN.
5. SPRAY BOOTH NO. 5, BLEEKER, FLOOR FILTER TYPE, MODEL NO. F-12-7, 12'-0" W. X 6'-10" H. X 11'-0" D., WITH ONE 2.0 HP EXHAUST FAN.
6. POST SPRAY BOOTH FILTERING SYSTEM CONSISTING OF:
   a. TWENTY - 24" X 24" X 4" MESH PRE- FILTERS.
   b. TWENTY 24" X 24" X 12" HEPA FILTERS, GLASFLOSS INDUSTRIES, MODEL MAGNA, PART #MAGPB2424B5BX, HIGH EFFICIENCY RIGID CELL.

B. VOC CONTROL SYSTEM CONSISTING OF:

1. ZEOLITE CONCENTRATOR, M & W, RE-GENSORB 40000, FIXED BED, 22'-0" W. X 10'-0" L. X 10'-10" H., WITH SEVEN BEDS.

2. AFTERBURNER, M & W, MODEL RE-GENSORB 40000, WITH A 5'-0" W. X 6'-4" L. X 5'-0" H., COMBUSTION CHAMBER, NATURAL GAS FIRED, 5,000,000 BTU PER HOUR MAXIMUM BURNER HEAT CAPACITY.

C. EXHAUST SYSTEM CONSISTING OF:

1. PERMANENT TOTAL ENCLOSURE (PTE), 74' - 7" W. X 110' - 0" L. X 21' - 0" H.

2. A 200-HP EXHAUST BLOWER VENTING FIVE SPRAY BOOTHS, SIX OVENS, AND TWO DIP TANKS.

BY THE ADDITION OF THREE NEW QUADRANT COATERS AND ONE NEW CONVEYORIZED OVEN INSIDE THE PERMANENT TOTAL ENCLOSURE (PTE) TO BE VENTED TO THE POST SPRAY BOOTH FILTERING SYSTEM AND VOC CONTROL SYSTEM.

A/N 498859 (P/C)

QUADRANT COATER #1, RANSOHOFF, MODEL NO. QC1200, SERIAL NO. 4695, 3'-5" W. X 9'-10" H. X 5'-7" L., WITH A SPRAY GUN, A 24 KW ELECTRIC HEATER, AND A 1 HP EXHAUST FAN.

A/N 498860 (P/C)

QUADRANT COATER #2, RANSOHOFF, MODEL NO. QC1200, SERIAL NO 5003, 3'-5" W. X 9'-10" H. X 5'-7" L., WITH A SPRAY GUN, A 28 KW ELECTRIC HEATER, AND A 2 HP EXHAUST FAN.

A/N 498861 (P/C)

QUADRANT COATER #3, RANSOHOFF, MODEL NO. QC1200, SERIAL NO 5002, 3'-5" W. X 9'-10" H. X 5'-7" L., WITH A SPRAY GUN, A 28 KW ELECTRIC HEATER, AND A 2 HP EXHAUST FAN.

A/N 498858 (P/C)

OVEN #9, THERMCRAFT INC., 2'-0" W. x10'-0" L. x 3'-0" H., WITH A 50 KW ELECTRIC HEATER, ONE 2 HP CIRCULATION BLOWER AND ONE 2 HP EXHAUST BLOWER.

BACKGROUND

E/M Coating Services submitted 5 applications for to install three new coaters, one new oven and modify the zeolite concentrator/oxidizer APC system to vent the new coaters and oven . These applications were filed on 5/19/09 in response to Notice of Violation # P45942 issued on 2/17/09.

The APC system is operating under existing P/O F81682 and will be modified to include the coaters and oven inside the permanent total enclosure (PTE) vented to the hybrid VOC control system. Parts coated in the coaters will be cured in oven # 1 or #2 under P/O F60215 or F60220. The oven is electrically heated and will be used to cure parts coated in the Model 16 dip tank (PO F60223). The flow rate to the hybrid system will not be increased since the exhaust flow from the PTE will remain the same.

The facility operates under a facility VOC cap of 216 lb/day. This equipment will be operated under the existing facility cap so there will be no emission increases from the facility as a result of this project.

E/M Coating is a Title V facility. A Title V permit revision application (A/N 498856) was also submitted with this application. The proposed project is considered as a "minor permit revision" to the Title V permit renewal issued on July 9, 2006. This is the second revision since the renewal.

PROCESS DESCRIPTION

E/M Coating is an aerospace fastener manufacturer. The coaters are used to spray barrier coatings to threaded fasteners used on military and commercial aircraft. A barrier coating is used to protect against galvanic corrosion by dissimilar metals. The coating may contain some hexavalent chromium. Exhaust flows from the 3 coaters and the oven will be vented to the concentrator/oxidizer to reduce VOC emissions by at least 95%. The APC system also has an existing HEPA filter system with 99.97% efficient filters to reduce hexavalent chromium emissions. In addition to the VOC facility cap, there is also a usage limit of hexavalent chromium sprayed in the five spray booths of 207 pounds per year, which will also now include these three new coaters.

EMISSION CALCULATIONS

There will be no increase in VOC and hexavalent chromium from the facility as a result of this project. The VOC emissions will remain the same under the 216 pounds per day facility cap, and the hexavalent chromium sprayed cap of 207 pounds per year for spray booths 1 thru 5 combined and the three new coaters. The oven is electric therefore no combustion emissions.

Operating schedule:	16 hrs/day, 6 days/wk, 52 wks/yr (maximum)
AEIS & NSR:	VOC R1=0.8 lb/hr, R2= 0.02 lb/hr
	R1=12.8 lb/day, R2= 0.38 lb/day

The following table summarizes the VOC, TAC and Hexavalent Chromium emissions.

Materials	*Usage*	*VOC*	*R1 VOC Emissions*		*Density*	*Toxic Cpd.*	*Toxic Wt %*	*Cr^{+6}*	*Cr^{+6} Emissions**		*Overspray = 35%* HEPA eff = 99.97%**	
	gal/day	*lb/gal*	*lb/day*	*lb/hr*	*lb/gal*			*lb/gal*	*lb/day*	*lb/hr*	*lb/day*	*lb/hr*
HI-Kote	164.8	6.07	1000	62.5	8.5	$SrCrO_4$	3%	0.07	0.232	**0.0145**	6.96E-05	**4.35E-06**
(barrier coating)												
									Toxic Emission		Afterburner-95% eff	
									lb/day	*lb/hr*	*lb/day*	*lb/hr*
						Toluene	25%		350	**21.8**	17.5	**1.09**
MEK	494	6.71	3315	207	6.71				3315	**207**	165.7	**10.36**
Acetone	1	0										
Total VOC Emissions			**4315**	**270**							**216**	**13.5**
Total Cr^{+6} Emissions									0.232	**0.0145**	6.96E-05	4.35E-06

* Cr+6 Emissions based on Hex Chrome sprayed limit for the equipment in the PTE (S/Bs 1-5 and 3 new coaters) vented to the APC is 207 lb/year. Assume 65% transfer efficiency for spray guns. HEPA filters are 99.97% efficient.

Cr^{+6} R1 = (207 lb/year) x (1-0.65) ÷ 52 wk/yr ÷ 6 day/wk ÷ 16 hr/day = 0.0145 lb/hr
R2 = 0.0145 lb/hr (1-0.9997) = 4.35 x 10^{-6}

RULE EVALUATION

RULE 212(c)(1) *This section requires a public notice for all new and modified permit units that may emit air contaminants located within 1,000 feet from the outer boundary of a school.*

Since there are no schools within 1,000 feet of the facility, a public notice will not be required by this section.

RULE 212(c)(2) *This section requires a public notice for all new and modified facilities which have on-site emission increases exceeding any of the daily maximums specified in subdivision (g).*

There is no increase in emissions from the facility due to this project. This equipment will be operated under the existing facility VOC cap. Public notice will not be required by this section.

RULE 212(c)(3) *This section requires a public notice for all new or modified permit units with increases in emissions of toxic air contaminants listed in Table I of Rule 1401 resulted in MICR greater than $1E^{-6}$ per permit unit or greater than $10E^{-6}$ per facility.*

There are toxic emissions listed in Rule 1401 as amended 3/7/08 from this equipment, however the calculations show that the project complies with all applicable R1401 requirements based on maximum potential emissions. The equipment will be vented to an APC system consisting of a HEPA pre filtration system for hexavalent chromium, and a zeolite concentrator and an oxidizer for VOC and TACs toluene and MEK. Public notice will not be required per this section.

RULE 212(g) *This section requires a public notice for all new and modified sources that have equipment emission increases exceeding any of the daily maximums as specified by Rule 212 (g).*

The potential to emit of VOC from this equipment is 216 lb/day which is over the threshold. The following table summarized the emission limits and increases. Public notice will be required by this section.

	ROG	NO_x	PM_{10}	SO_2	CO	Pb
Per Equipment	216	0	0	0	0	0
MAX MDC Limit (lb/day)	30	40	30	60	220	3
Required Public Notice	Yes	No	No	No	No	No

RULE 401 *Visible Emissions*

Visible emissions are not expected with proper maintenance and operation of this equipment. The system shows no visible emissions complaints at this facility.

RULE 402 *Nuisance*

Operation of this equipment is not expected to create complaints or nuisance with proper maintenance and operation. The system shows no nuisance complaints at this facility.

REG XI The company will use coatings and thinners with VOC content in excess of the Rules 1107 and 1124 limitations but the coaters will be vented to an APC system consisting of a HEPA pre filtration system, a zeolite concentrator and an oxidizer inside the PTE. The APC system is required by permit condition to

meet 95% destruction efficiency and 100% collection efficiency for 95% overall. Compliance is expected.

RULE 1171 *Solvent Cleaning Operations*

Acetone is used for cleaning. Compliance is expected.

REG XIII *Rule 1303(a), Best Available Control Technology (BACT)*

The coaters and oven will be vented to an APC system consisting of a HEPA pre filtration system for PM_{10} and a zeolite concentrator and an oxidizer inside the PTE for VOC, therefore BACT is met.

Rule 1303 (b)(1), Modeling

Modeling is not required for VOC. PM_{10} is negligible after the HEPA filters

Rule 1304 (c)(1), Offsets Exemption

The VOC emissions from the 3 coaters will be bubbled into the existing facility limit of 216 lbs/day therefore offsets are not required.

RULE 1401 *New Source Review of Toxic air Contaminants*

There are toxic emissions from this project listed in Rule 1401 as amended 3/7/08 (MEK – acute, toluene – acute & chronic, and hexavalent chromium – carcinogenic and chronic). The TAC emissions are summarized in the attached spreadsheet. Tier 2 analysis was performed and both the chronic and the acute commercial and residential hazard indices are less than one, and the MICR less than one in a million. Since there is an existing limit on the amount of hexavalent chromium sprayed, there is no increase in emissions of hexavalent chromium as a result of this project since the new coaters will be operated under the same cap.

REG XXX

This facility is not in the RECLAIM program. The proposed project is considered as a "minor permit revision" to the Title V permit for this facility.

Rule 3000(b)(12)(vi) defines a "minor permit revision" as any Title V permit revision that does not result in an increase in emissions of a pollutant subject to Regulation XIII – New Source Review (non-RECLAIM pollutants) or a hazardous air pollutant (HAP).

The proposed project is not expected to result in an increase in emissions of a pollutant subject to Regulation XIII – New Source Review (non-RECLAIM pollutants) or a hazardous air pollutant (HAP), and therefore is considered as a "minor permit revision" pursuant to Rule 3000(b)(12)(A)(vi).

This proposed project is the 2nd permit revision to the Title V renewal permit issued to this facility on July 9, 2006. The following table summarizes the permit revisions since the Title V renewal permit was issued :

Revisions since Renewal	***HAP***	***VOC***	***NOx***	***PM_{10}***	***SOx***	***CO***
1st Revision: Installation of a HEPA filtering system upstream of concentrator and oxidizer, removal of HEPA filter upstream of Spray Booth #4, also incorporation of 5 spray booths in PTE to the permit under project.	0	0	0	0	0	0
2nd Revision: Addition of 3 coaters (A/N 498859-61), 1 oven (A/N 498858) and modification of the APC concentrator/oxidizer to include the coaters and oven in the PTE.	0	0	0	0	0	0
Cumulative Total	0	0	0	0	0	0
Maximum Daily Limit	30	30	40	30	60	220

RECOMMENDATION

The proposed project is expected to comply with all applicable District Rules and Regulations. Since the proposed project is considered as a "minor permit revision", it is exempt from the public participation requirements under Rule 3006(b). A proposed permit incorporating this permit revision will be submitted to EPA for a 45-day review pursuant to Rule 3003(j). If EPA does not have any objections within the review period, a revised Title V permit will be issued to this facility with Permits to Construct for this equipment in Section D.